

**TABLE 2**  
**CIGATAM COLLABORATIVE STUDY - MARCH 1995**  
**PHYSICAL TESTING AND CHEMICAL ANALYSIS**

**Lab Name:** PM USA - PMPI Product Testing Laboratory

**Sample Code Description:** Baronet Long Size Box

**CIGARITE / PAPER**

	Total RTD (mm/H <sub>2</sub> O)	Circ (mm)	Perm (coresta)	Total Cigt. Len (mm)
1	99	24.85	17	78.42
2	96	24.89	19	78.16
3	96	24.85	22	78.03
4	94	24.82	16	78.22
5	95	24.81	19	78.40
6	100	24.90	15	78.82
7	104	24.86	19	78.30
8	91	24.83	18	78.47
9	103	24.95	16	78.44
10	105	24.85	19	78.65
11	108	24.90	20	78.39
12	109	24.86	17	0.231
13	97	24.80	17	
14	97	24.85	18	
15	96	24.82	19	
16	95	24.83	19	
17	105	24.85	20	
18	107	24.85	29	
19	98	24.95	15	
20	88	24.88	18	
21	88	24.82	15	
22	88	24.80	20	
23	89	24.85	23	
24	107	24.85	19	
25	107	24.88	23	
Mean	98	24.86	19	
Std Dev	6.771	0.040	3.107	

**FILTER**

Filter RTD (mm/H <sub>2</sub> O)	Vent (%)	1pg Len (mm)	Filter Len (mm)
53	0	24.5	19.71
53	0	24.0	19.82
58	0	24.0	19.74
55	0	24.0	20.60
53	0	25.0	20.72
55	0	24.5	20.52
54	0	24.0	19.73
51	0	24.0	20.14
60	0	24.0	19.86
62	0	24.0	19.90
59	0	24.2	20.1
64	0	0.350	0.394
64	0		
55	0		
55	0		
52	0		
54	0		
55	0		
55	0		
55	0		
52	0		
52	0		
51	0		
51	0		
64	0		
56	0		
4.232	0.000		

Mean  
Std Dev

**FIRMNESS**

	Cigt Tob Weight (g)	Cigt Weight (g)	Paper/Plug Weight (g)	Pack OV (%)	Pack Firmness (mm)
1	0.693	0.883	0.190	12.07	2.65
2	0.687	0.877	0.190	12.18	2.55
3	0.692	0.885	0.192	n/a	2.60
4	0.701	0.894	0.192	n/a	2.42
5	0.695	0.887	0.192	n/a	2.73
Mean	0.694	0.885	0.191	12.125	2.59
Std Dev	0.005	0.006	0.001	0.078	0.116

Loose Ends g/50 cig
0.422
0.398
0.509
0.704
0.5083
0.1389

Mean  
Std Dev

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**TABLE 2**  
**CIGATAM COLLABORATIVE STUDY - MARCH 1995**

**PHYSICAL TESTING AND CHEMICAL ANALYSIS**

**Lab Name:** PM USA - PMPI Product Testing Laboratory

**Sample Code Description:** Baronet Long Size Box

**FILLER / CHEMICAL ANALYSIS**

	Total Alkaloids (%)	Total R. Sugar (%)	Total Nitrogen (%)	Ash (%)	Chlorides (%)
1	1.19	7.07	2.44	15.9	0.90
2	1.14	7.36	2.43	15.8	0.89
3	1.20	7.06	2.43	15.9	0.91
4	1.21	7.11	2.50	15.9	0.90
5	1.21	7.19	2.46	15.9	0.91
6	1.21	6.97	2.43	16.0	0.91
7	1.22	6.58	2.43	15.9	0.92
8	1.21	7.03	2.41	15.8	0.91
9	1.24	6.69	2.46	15.9	0.91
10	1.23	7.14	2.48	15.9	0.90
Mean	1.21	7.02	2.45	15.9	0.91
Std Dev	0.027	0.230	0.028	0.057	0.008

	Total Alkaloids (% DWB)	Total R. Sugar (% DWB)	Total Nitrogen (% DWB)	Ash (% DWB)	Chlorides (% DWB)
1	1.36	8.05	2.78	18.11	1.03
2	1.30	8.38	2.77	18.00	1.01
3	1.37	8.04	2.77	18.11	1.04
4	1.38	8.10	2.85	18.11	1.03
5	1.38	8.19	2.80	18.11	1.04
6	1.38	7.94	2.77	18.22	1.04
7	1.39	7.49	2.77	18.11	1.05
8	1.38	8.01	2.74	18.00	1.04
9	1.41	7.62	2.80	18.11	1.04
10	1.40	8.13	2.82	18.11	1.03
Mean	1.37	8.00	2.79	18.1	1.03
Std Dev	0.031	0.262	0.031	0.065	0.010

O.V. % (ground)	<u>12.20</u>
Tobacco Wt (12.5% OV)	<u>0.668</u>
Equilibrated OV (%)	<u>12.94</u>
Equilibrated CV (%)	<u>5.02</u>

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**TABLE 2**  
**CIGATAM COLLABORATIVE STUDY - MARCH 1995**  
**PHYSICAL TESTING AND CHEMICAL ANALYSIS**

**Lab Name:** PM USA - PMPI Product Testing Laboratory

**Sample Code Description:** Marlboro Lights long Size Box

**CIGARITE / PAPER**

	Total RTD (mm/H <sub>2</sub> O)	Circ (mm)	Perm (coresta)	Total Cigt. Len (mm)
1	79	25.03	30	78.47
2	76	25.04	34	78.12
3	75	24.93	38	78.49
4	75	24.91	29	78.70
5	94	24.92	29	78.69
6	78	25.07	29	78.68
7	90	24.93	32	78.24
8	85	25.06	32	78.59
9	84	24.92	33	78.11
19	84	24.98	38	78.48
11	84	24.94	26	78.46
12	83	25.02	33	0.227
13	88	24.98	27	
14	88	25.04	26	
15	93	24.92	27	
16	94	25.01	36	
17	88	24.94	30	
18	79	25.07	24	
19	78	24.97	34	
20	79	25.01	24	
21	93	24.94	31	
22	94	25.02	32	
23	95	25.01	27	
24	95	25.05	29	
25	n/a	24.98	29	
Mean	85	24.99	30	
Std Dev	6.953	0.053	3.835	

**FILTER**

Filter RTD (mm/H <sub>2</sub> O)	Vent (%)	1pg Len (mm)	Filter Len (mm)
68	21	27.0	20.41
65	22	27.0	20.25
65	21	27.0	19.95
53	17	26.5	20.48
66	18	27.5	20.12
57	22	26.5	19.46
64	19	27.0	20.46
62	26	27.0	19.87
56	15	26.5	20.31
58	22	27.0	19.88
55	24	26.9	20.12
63	17	0.316	0.328
63	27		
57	16		
58	21		
64	22		
61	17		
62	15		
61	21		
58	21		
58	25		
67	16		
66	28		
68	33		
66	29		
62	21		
4.339	4.682		

Mean  
Std Dev

**FIRMNESS**

	Cigt Tob Weight (g)	Cigt Weight (g)	Paper/Plug Weight (g)	Pack OV (%)	Pack Firmness (mm)
1	0.673	0.872	0.199	12.43	2.81
2	0.675	0.874	0.200	11.94	3.20
3	0.674	0.874	0.200	n/a	2.91
4	0.680	0.879	0.200	n/a	3.14
5	0.694	0.894	0.199	n/a	3.01
Mean	0.679	0.879	0.200	12.185	3.01
Std Dev	0.009	0.009	0.001	0.346	0.160

Loose Ends g/50 cig
0.560
0.466
0.345
0.349
0.430
0.10325

Mean  
Std Dev

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**TABLE 2**  
**CIGATAM COLLABORATIVE STUDY - MARCH 1995**  
**PHYSICAL TESTING AND CHEMICAL ANALYSIS**

**Lab Name:** PM USA - PMPI Product Testing Laboratory

**Sample Code Description:** Marlboro Lights Long Size Box

**FILLER / CHEMICAL ANALYSIS**

	Total Alkaloids (%)	Total R. Sugar (%)	Total Nitrogen (%)	Ash (%)	Chlorides (%)
1	1.44	6.96	2.49	15.1	0.80
2	1.42	7.32	2.54	15.0	0.80
3	1.43	6.84	2.48	14.9	0.79
4	1.47	6.76	2.49	14.7	0.79
5	1.46	7.11	2.49	14.8	0.78
6	1.44	7.07	2.58	14.9	0.78
7	1.45	6.78	2.53	14.9	0.79
8	1.47	6.81	2.55	15.0	0.79
9	1.48	6.61	2.51	15.1	0.78
10	1.49	6.57	2.51	15.0	0.79
Mean	1.46	6.88	2.52	14.9	0.79
Std Dev	0.023	0.233	0.032	0.126	0.007

	Total Alkaloids (% DWB)	Total R. Sugar (% DWB)	Total Nitrogen (% DWB)	Ash (% DWB)	Chlorides (% DWB)
1	1.64	7.95	2.84	17.24	0.91
2	1.62	8.36	2.90	17.13	0.91
3	1.63	7.81	2.83	17.01	0.90
4	1.68	7.72	2.84	16.78	0.90
5	1.67	8.12	2.84	16.90	0.89
6	1.64	8.07	2.95	17.01	0.89
7	1.66	7.74	2.89	17.01	0.90
8	1.68	7.78	2.91	17.13	0.90
9	1.69	7.55	2.87	17.24	0.89
10	1.70	7.50	2.87	17.13	0.90
Mean	1.66	7.86	2.87	17.1	0.90
Std Dev	0.026	0.266	0.037	0.144	0.008

Q.V. % (ground)	12.42
Tobacco Wt (12.5%)	0.6800
Equilibrated OV (%)	13.14
Equilibrated CV (%)	4.91

PM3000984790

**TABLE 2**  
**CIGATAM COLLABORATIVE STUDY - MARCH 1995**  
**PHYSICAL TESTING AND CHEMICAL ANALYSIS**

Lab Name: PM USA - PMPI Product Testing Laboratory

Sample Code Description: Marlboro Long Size Box

**CIGARITE / PAPER**

	Total RTD (mm/H <sub>2</sub> O)	Circ (mm)	Perm (coresta)	Total Cigt. Len (mm)
1	115	25.05	28	78.35
2	96	25.17	29	78.17
3	113	25.04	22	77.96
4	104	24.99	33	78.22
5	114	25.01	36	78.52
6	113	25.02	31	78.49
7	94	24.99	38	78.17
8	97	25.12	23	78.29
9	101	25.02	32	78.48
19	108	24.98	35	78.29
11	103	25.10	30	78.29
12	104	25.03	26	0.175
13	107	25.12	31	
14	107	25.11	31	
15	97	24.98	31	
16	113	25.01	33	
17	108	24.99	27	
18	111	25.04	30	
19	98	25.17	32	
20	91	25.02	23	
21	125	25.02	27	
22	107	25.05	27	
23	103	25.11	31	
24	125	25.00	34	
25	113	25.00	38	
Mean	107	25.05	30	
Std Dev	8.740	0.058	4.275	

**FILTER**

Filter RTD (mm/H <sub>2</sub> O)	Vent (%)	Top Len (mm)	Filter Len (mm)
76	0	24.5	20.02
62	0	24.0	20.41
72	0	24.5	19.94
68	0	24.0	20.02
69	0	24.0	20.49
72	0	24.0	19.93
72	0	24.5	19.99
49	0	24.0	19.80
71	0	24.0	20.42
76	0	24.0	19.79
68	0	24.1	20.09
71	0	0.220	0.276
71	0		
75	0		
61	0		
68	0		
74	0		
70	0		
65	0		
56	0		
76	0		
70	0		
61	0		
77	0		
77	0		
69	0		
6.898	0.000		

Mean  
Std Dev

**FIRMNESS**

	Cigt Tob Weight (g)	Cigt Weight (g)	Paper/Plug Weight (g)	Pack OV (%)	Pack Firmness (mm)
1	0.669	0.868	0.200	12.54	2.86
2	0.683	0.884	0.200	12.12	3.08
3	0.674	0.876	0.202	n/a	3.11
4	0.674	0.874	0.200	n/a	3.05
5	0.670	0.870	0.200	n/a	3.08
Mean	0.674	0.874	0.200	12.33	3.04
Std Dev	0.006	0.006	0.001	0.297	0.101

Loose Ends g/50 cigs
0.927
0.546
0.415
0.417
0.576
0.2417

Mean  
Std Dev

PM3000984791

**TABLE 2**  
**CIGATAM COLLABORATIVE STUDY - MARCH 1995**

**PHYSICAL TESTING AND CHEMICAL ANALYSIS**

**Lab Name:** PM USA - PMPI Product Testing Laboratory

**Sample Code Description:** **Marlboro Long Size Box**

**FILLER / CHEMICAL ANALYSIS**

	<b>Total Alkaloids (%)</b>	<b>Total R. Sugar (%)</b>	<b>Total Nitrogen (%)</b>	<b>Ash (%)</b>	<b>Chlorides (%)</b>
1	1.51	7.20	2.45	15.3	1.04
2	1.48	7.22	2.48	15.4	1.02
3	1.43	7.42	2.48	15.1	1.03
4	1.48	7.25	2.42	15.1	1.04
5	1.51	6.85	2.42	15.0	1.02
6	1.53	6.88	2.45	15.1	1.04
7	1.49	6.86	2.44	15.1	1.03
8	1.50	7.20	2.47	15.2	1.04
9	1.48	7.46	2.44	15.3	1.03
10	1.46	6.85	2.43	15.3	1.03
Mean	1.49	7.12	2.45	15.2	1.03
Std Dev	0.028	0.240	0.023	0.129	0.008

	<b>Total Alkaloids (% DWB)</b>	<b>Total R. Sugar (% DWB)</b>	<b>Total Nitrogen (% DWB)</b>	<b>Ash (% DWB)</b>	<b>Chlorides (% DWB)</b>
1	1.73	8.24	2.80	17.50	1.19
2	1.69	8.26	2.84	17.61	1.17
3	1.64	8.49	2.84	17.27	1.18
4	1.69	8.29	2.77	17.27	1.19
5	1.73	7.83	2.77	17.16	1.17
6	1.75	7.87	2.80	17.27	1.19
7	1.70	7.85	2.79	17.27	1.18
8	1.72	8.24	2.83	17.39	1.19
9	1.69	8.53	2.79	17.50	1.18
10	1.67	7.83	2.78	17.50	1.18
Mean	1.70	8.14	2.80	17.4	1.18
Std Dev	0.032	0.274	0.026	0.147	0.009

<b>O.V. % (ground)</b>	<u>12.57</u>
<b>Tobacco Wt (12.5%OV)</b>	<u>0.666</u>
<b>Equilibrated Ov (%)</b>	<u>13.52</u>
<b>Equilibrated CV (%)</b>	<u>4.97</u>